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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/058,335	04/10/98	HEGDE	G PMS238256

LM02/0524
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EXAMINER

LEE, C

ART UNIT	PAPER NUMBER
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2739

DATE MAILED: 05/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/058,335

Applicant(s)

Hedge

Examiner

Andrew Lee

Group Art Unit
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☒ Responsive to communication(s) filed on Apr 10, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-43 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☒ Claim(s) 32-43 is/are allowed.

☒ Claim(s) 1, 4-6, 8-12, 14, 15, 22-25, and 27-30 is/are rejected.

☒ Claim(s) 2, 3, 7, 13, 16-21, 26, and 31 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3 & 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 7-12, 14, 15, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Murthy et al U.S. Patent No. 5,610,905.

Re Claim 1, Murthy et al teaches in fig 4 (flow table) comprising of plurality of records which maps the station address (MAC) with the port number; further teaches fig 1 that the bridge (switching module) which operates in the 2 layer; fig 16A teaches forwarding algorithm wherein the packet entering the bridge accesses the Access Cache to determine if the match is found (means for forwarding 2 addresses); Murthy et al further teaches that the bridge can incorporated the function of the router which operates in the 3 layer (see col 9, lines 25-38).

Re Claims 4, 14, 15, wherein the MAC address for the bridge is the non IP protocol and the network layer 3 for the router refers to the IP protocol.

Re Claim 5, wherein Fig 16A teaches in step 160.3, 160.7, & 160.8 teaches the updating the bridging table if the access bridging cache does not match the received packet 160.1.

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Re Claim 8-10, 24, refer to fig 1, wherein the hosts can interconnect with plurality of different LANs 2.

Re Claim 11, refer to Claim 1, wherein the fig 4 (flow table) comprising of plurality of records which maps the station address (MAC) with the port number, it is apparent that the network address would be mapped with the associated ports in the flow table; depending on the receive packet, the CPU will determine the associated port(s) with the information in the table.

Re Claim 12, refer to Claim 5.

3. Claims 29, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Sunada et al U.S. Patent No. 5,572,533.

Re Claims 29 and 30, Sunada et al teaches in fig 5, the step of receiving packet from interface (receiving a first packet at a first port); identifying protocol (extracting protocol identifier); determining if the packet need to be routed; if the not routed then MAC address filter (Ethernet address), if routing needed then network address filter (IP address).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 6, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murthy et al U.S. Patent No. 5,610,905.

Re Claims 6, 22, 23, Murthy et al fails to explicitly teach the switch module and flow table are comprised in ASIC. Examiner take official notice that ASIC technology is well known in the art. The motivation would have been to reduce board size and power consumption. Therefore, it would have been obvious to one skilled in the art to have implemented the switch module and flow table in ASIC.

6. Claim 25, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murthy et al U.S. Patent No. 5,610,905 in view of Spinney et al U.S. Patent No. 5,390,173.

Re Claims 25, 27, 28, Murthy et al teaches the fig 4, the source address (identifying the first address) associated with the port number (identifying the port number) wherein the combination of source address and port number creates a record (creating a record) which is stored in the table. Murthy et al fails to explicitly teach the linking the record to a hash. However, Spinney et al teaches the hashing of the received packet. The motivation would have been to provide an efficient searching algorithm in the look-up table. Therefore, it would have been obvious to one skilled in the art to have incorporated the hashing function of Spinney et al into the teaching of Murthy et al to improve throughput.

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Allowable Subject Matter

7. Claims 2, 3, 7, 13, 16, 17, 18-21, 26, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to teach in combination of Claims 1 and 2, an address resolution hash table comprising of first and second hash entries wherein the hash entries are of 2nd and 3rd layer addresses and stored in the address resolution records table and linked to the resolution hash table.

Prior art fails to teach in combination of Claims 11-13, a switch engine that determines whether the first and third address resolution records and second and fourth address resolution record exist in the first and second flow tables.

Prior art fails to teach in combination of Claims 25 and 26, the swapping address within the second data packet with the swap address in accordance with the record.

Prior art fails to teach in combination of Claims 29 and 31, the wherein if protocol identifier is IP, then switching the first packet between first and second prot based on the socket number of first packet.

9. Claims 32-43 are allowed.

10. Inquiry concerning this communication or eariler communications from the examiner should be directed to Andrew Lee whose telephone number is 703)305-1500. The examiner can

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normally be reached on Monday-Friday from 8:30 AM - 6:00PM, Eastern Time. If attempts to reach the examiner by telephone are not successful, the examiner's supervisor,

Mr. Chau Nguyen, can be reached on 703)308-5340.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, DC 20231 or faxed to:

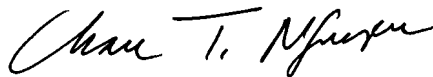
(703) 308-9051, for formal communications intended for entry or (703) 308-5403, for informal or draft communications, please label **"PROPOSED"** or **"DRAFT"**.

Hand-delivered responses should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, Virginia Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703)305-3900.


Andrew Lee

May 18, 2000



CHAU NGUYEN
PRIMARY EXAMINER